

ABSTRACT
UNACTIVATED OOCYTES AS CYTOPLAST RECIPIENTS
FOR NUCLEAR TRANSFER

5 A method of reconstituting an animal embryo involves
transferring a diploid nucleus into an oocyte which is
arrested in the metaphase of the second meiotic division.
The oocyte is not activated at the time of transfer, so
10 that the donor nucleus is kept exposed to the recipient
cytoplasm for a period of time. The diploid nucleus can
be donated by a cell in either the G0 or G1 phase of the
cell cycle at the time of transfer. Subsequently, the
reconstituted embryo is activated. Correct ploidy is
15 maintained during activation, for example, by incubating
the reconstituted embryo in the presence of a microtubule
inhibitor such as nocodazole. The reconstituted embryo
may then give rise to one or more live animal births.
The invention is useful in the production of transgenic
animals as well as non-transgenics of high genetic merit.